

UT262E
Phase Detector
User Manual

P/N:110401110460X

Preface

Thank you for purchasing this brand new product. In order to use this product safely and correctly, please read this manual thoroughly, especially the safety notes.

After reading this manual, it is recommended to keep the manual at an easily accessible place, preferably close to the device, for future reference.

Limited Warranty and Liability

Uni-Trend guarantees that the product is free from any defect in material and workmanship within one year from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination or improper handling. The dealer shall not be entitled to give any other warranty on behalf of Uni-Trend. If you need warranty service within the warranty period, please contact your seller directly.

Uni-Trend will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by using this device.

Content

⚠ Warning

Thank you for purchasing our UT262E non-contact Phase Detector, for better use of this product, be sure to:

------To read this manual carefully.

------Comply strictly with safety rules and precautions set out in this manual.

- Pay special attention to safety under any circumstances while using the instrument.
- Take note of the label text and symbols on the panel and back of the instrument.
- Check the instrument, lead wire and clamps, make sure no damage, no exposed and no break.
- Please don't touch an exposed wire in measurement.
- Please don't place and store the instrument at the place with high temperature, humidity, moisture condensation and straight sunlight for a long time.
- Remove the battery if the instrument is not in use for a long time.
- Take not of the polarity when replacing the battery, don't replace batteries before moving away the clamps from wires.
- The operation, disassembly and maintenance of the instrument must be carried out by qualified personnel authorized to do so.
- The instrument should be stopped from being used immediately and sealed if danger is brought up in case of continued use; only a competent body can be authorized to deal with it.

- If use the detector without following up the operating instructions, the protection provided by the detector may be impaired or lost.
- This product can not be used in an environment containing dangerous uninsulation conductors or conductors with damaged insulation
- "⚠" on the instrument is the warning sign, the contents of this manual must be followed for safe operation.
- "⚠" in the manual is the danger sign, the contents of this manual must be followed for safe operation.

Introduction

UT262E Non-contact Phase Detector breaks through the traditional methods of phase detection. The traditional method is to connect three exposed clips or probes to three bared live wires, so it needs to disconnect the three wires. While UT262E Non-contact Phase Detector adopts non-contact measurement, no need to disconnect wires, no need to touch high voltage bared live wires. With the three clamps clipped on the insulation layer of three phase live wires, then the phase can be detected, meanwhile sound and light indicates positive and negative states.

UT262E Non-contact Phase Detector also has the functions of live wire examination, power inspection, phase deficiency judgement, breakpoints finding, breakpoints positioning.

UT262E Non-contact Phase Detector is a convenient and fast tool for phase detection, with clear display. It improves the safety of field testing, ensures the safety of operators, increases productivity.

Electrical Symbols

⚠	Extremely dangerous! The operator must strictly abide by the safety rules, otherwise there is a risk of electric shock, resulting bodily injury or fatalities.
⚠	Warning! Safety rules must be abided by, otherwise personal injury or equipment damage may be caused.
~	Alternate Current (AC)
⎓	Direct Current (DC)
CAT III	It is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation.
CAT IV	It is applicable to test and measuring circuits connected at the source of the building's low-voltage MAINS installation.

Technical Specification

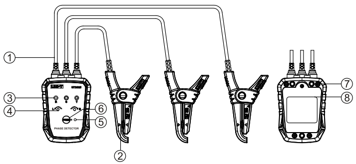
Function	Phase detection (positive/negative), power inspection, phase deficiency judgement, breakpoints finding, breakpoints positioning, wire examination.
Battery	2*1.5V AA (R6P)
Measurement Range	70-1000VAC (Three phase), 45Hz~66Hz (sine wave, continuously)
Diameter of wires to be clamped	Outer diameter: ø2mm~ø40mm (insulated wire)
LED Display	Positive phase sequence: R-S-T lamps light up, synchronized R lamp lights up green, the buzzer sounds intermittently and slowly.
	Negative phase sequence: R-S-T lamps light up, synchronized L lamp lights up red, the buzzer sounds intermittently and fast.
	Line-voltage indication: R-S-T lamps light up
	Default phase: R-S-T lamps light off
	Open circuit: R-S-T lamps light off
Power-on Indication	Power indicator lamp lights up blue
Auto Power Off	The power will be turned off automatically if the instrument remains idle for 5 minutes after the power is turned on.

Dimension	88mm(L)x66mm(W)x30mm(H)
Lead Wire Length	0.6m
Weight	238g (including batteries)
Operating Temperature and Humidity	0°C~50°C; below 85% RH, non-condensing
Storage temperature and Humidity	-20°C~60°C; below 90% RH, non-condensing
Maximum Measurement Voltage	AC 1000V
Dielectric Strength	5.4kVrms
Safety Specifications	CE, UKCA, IP52, EN61010-1: 2010+A1: 2019, EN 61010-2-030:2021+A11:2021, pollution class 2, CAT III 1000V, CAT IV 600V, transient over voltage 8000v, Indoor use

Corresponding Relation

A	B	C
L1	L2	L3
R	S	T
U	V	W

Structure

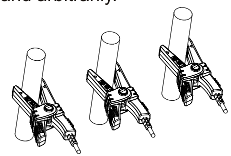


1. Lead wire
2. Clamps
3. R, S, T indicator lamp
4. Phase sequence indicator lamp
5. Power on indicator lamp
6. Power on/off button
7. Magnet
8. Battery compartment

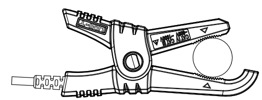
Operating Method

1. Phase sequence detection
   Danger! High voltage! Please pay attention to safety!

(1). Clamp three phase wires with the three clamps respectively and arbitrarily.



(2). Put the wires at the position marked with "▲" "▼"



(3). Press "POWER" button, the power indicator lamp lights up blue and the buzzer sounds once. If the lamp cannot light up, maybe the battery is in low power or check the instrument, in that case, please replace the battery or repair the instrument.

(4). If the three phase sequence indicator lamps lights up and R indicator lamp lights up green, and the buzzer sounds intermittently and slowly, so it is positive phase sequence. If the three phase sequence indicator lamps lights up and L indicator lamp lights up red, and the buzzer sounds intermittently and fast, so it is negative phase sequence

(5). Press "POWER" button in power-on state, the power indicator lamp turns off and the buzzer sounds once. The power will be turned off automatically if the instrument remains idle for 5 minutes after the power is turned on, to reduce power consumption.

2. Live wire examination, power inspection, phase deficiency judgement, breakpoints finding

Danger! High voltage! Please pay attention to safety!

(1). Clamp one wire with any one of clamps, if it is an electrified wire (AC 70-1000V), R, S, T lamps light up. In this way to check whether the wire is electrified.

(2). Clamp one wire with any one of clamps, if there is phase deficiency, R, S, T lamps won't light up.

(3). Clamp one wire with any one of clamps and move the clamp along the wire, if R, S, T lamps light off, it means the section wire before this point has a break. Breakpoints can be found out accurately by shortening the range of detection. It is a convenient and safe method for non-contact detection.

Note: This function is very suitable for detecting the circuit fault in the wire, safe and fast!

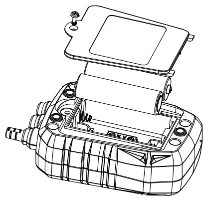
(4). Clamps and lamps corresponding table:

Test state	Power-on indication	LED indicator state						Buzzer
		R	S	T	Positive phase R	Negative phase L		
Positive phase	● (blue)	● (red)	● (red)	● (red)	● (green)	○	Constant on	Intermittent and slow sound
Negative phase	● (blue)	● (red)	● (red)	● (red)	○	● (red)	Constant on	Intermittent and fast sound
No phase deficiency (Clip two clamps on the same electrified wire)	● (blue)	● (red)	● (red)	● (red)	○	○	Flicker	No sound
A phase deficiency	● (blue)	○	● (red)	● (red)	○	○	Constant on	No sound
B phase deficiency	● (blue)	● (red)	○	● (red)	○	○	Constant on	No sound
C phase deficiency	● (blue)	● (red)	● (red)	○	○	○	Constant on	No sound

Battery Replacement

Pay attention to the battery polarity!

1. Make sure the clamps have moved away from wires, don’t replace the batteries during measurement.
2. Press “POWER” to turn off the instrument.
3. Loosen the screw, and then remove the battery cover.
4. Replace the batteries with new ones, notice the polarity.
5. Put the battery cover back in place, and tighten the screw.
6. Press “POWER” to check whether the instrument can be turned on normally, if it cannot be turned on, please check if the battery power is sufficient or repeat step 3.



Trouble Shooting

Symptoms	Possible Causes	Remedies
Can’t power on (LED power indicator lamp is off, without any display)	No batteries	Set the batteries
	Wrong battery type	Replace with right type
	Insufficient capacity of battery	Replace the batteries
	Faulty battery polarity	Install batteries in correct polarity
	Poor contact of battery contacts	Replace the battery contacts
	Battery cover not completely covered	Cover it again
	Defect of circuit component	Repair or replace the PCB
LED dim display	Insufficient capacity of battery	Replace the batteries
Incapable of measurement	The three phase wires are not electrified	Not belong to instrument faults
	Failed to clamp the fine wire	Wind the fine wire around the clamp
	Failed to clamp the wire	Refer the manual to clamp again
	Lead wire break	Change the lead wire
	Defect of circuit component	Repair or replace the PCB

Packing List

Instrument ------------------------------ 1 pcs
Cloth bag ------------------------------- 1 pcs
Battery ---------------------------------- 2 pcs
User manual --------------------------- 1 pcs

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